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Tuna Newsletter

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- **Southwest Region**
- **Southwest Fisheries Science Center**

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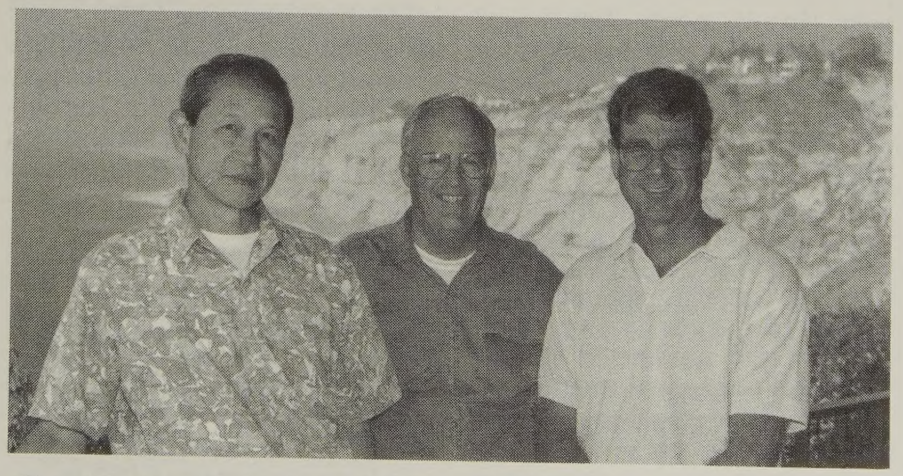
25th Anniversary Edition

With this issue, the Tuna Newsletter begins its second quarter-century of highlighting U.S. tuna news and the tuna-related activities of the NMFS Southwest Region. Tuna are found in all the world's oceans and are fished by dozens of nations using a multitude of gears. The management of this valuable resource requires good science, international agreements and multi-cultural understandings.

For the next four issues, the Tuna Newsletter will be flying its 25-year anniversary banner in recognition of the Southwest Region's long-term commitment to the science-based conservation and management of tuna resources for the benefit of our nation. The SWR, the SWFSC and the staff of the Tuna Newsletter thank our readers for their continuing interest in our endeavors.



The publication staff of the Tuna Newsletter celebrates the 25th year of production. Left- David Au (Reports), Center- Ken Raymond (Art Director), Right- Alan Jackson (Editor)

U.S. TUNA STATISTICS

Editor's note: The following articles were prepared by NMFS personnel from data and information gathered from sources in the U.S. tuna industry and government.

U.S. CANNED TUNA INDUSTRY HIGHLIGHTS, FIRST QUARTER 1997

Total receipts of tuna by U.S. canners during the first quarter of 1997 (January-March) decreased by 11% to the equivalent of 89,900 short

Table 1. Total U.S. cannery receipts (st) by species for the first quarters of 1996 and 1997. Totals may not add due to rounding.

Jan-Mar	Type	Albacore	Skipjack	Yellowfin[1]	TOTAL
1996	ROUND	27,300	37,100	19,200	83,700
	GILLED & GUTTED	*	0	500	500
	LOIN	0	5,000	2,600	7,600
	TOTAL (as received)	27,300	42,100	22,300	91,800
	TOTAL (round weight)[2]	27,300	48,400	25,700	101,400
1997	ROUND	21,000	41,100	13,000	75,200
	GILLED & GUTTED	*	0	400	400
	LOIN	100	3,200	3,100	6,400
	TOTAL (as received)	21,100	44,400	16,500	81,900
	TOTAL (round weight)[2]	21,200	48,400	20,400	89,900

*Less than 100 st reported for this category.
[1]May include a small amount of bigeye tuna.
[2]Converted to round weight by using factors of 1.11 for gilled-and-gutted and 2.25 for loins.

Table 2. U.S. cannery receipts (st) of domestic and imported tuna by species for the first quarters of 1996, 1997 and the recent (1992-96) first quarter average. Totals may not add due to rounding.

Jan-Mar	Source	Albacore	Skipjack	Yellowfin[1]	TOTAL
		TOTAL CANNERY RECEIPTS (ALL LOCATIONS)			
1996	DOMESTIC	1,500	25,800	11,700	38,900
	IMPORTED	25,900	16,400	10,600	52,900
	TOTAL	27,300	42,100	22,300	91,800
1997	DOMESTIC	900	28,100	8,600	37,500
	IMPORTED	20,200	16,300	7,900	44,400
	TOTAL	21,100	44,400	16,500	81,900
1992-96 Average	DOMESTIC	1,500	34,900	10,600	47,000
	IMPORTED	22,100	18,800	10,000	50,800
	TOTAL	23,600	53,800	20,500	97,900

[1]May include a small amount of bigeye tuna.

tons (st) of whole fish (round weight), compared to the first quarter of 1996 (Table 1). The principal species received was skipjack tuna with 54% of the total, followed by albacore and yellowfin tuna, each with about 23% of the total. Skipjack tuna receipts held steady for the quarter, while albacore and yellowfin tuna receipts were each down over 20%.

Although the vast majority of tuna received by U.S. canners is whole fish, some quantity is received as loins or gilled-and-gutted. Receipts of tuna loins for the first quarter of 1996 were down by 16%. (Loins and gilled-and-gutted receipts are converted to round weight receipts by factors of 2.25 and 1.11, respectively. For this article, unconverted receipts are used unless otherwise stated.)

Domestic deliveries to U.S. canners for the first quarter of 1996 decreased by 4%, and imported deliveries decreased by 16% (Table 2). Skipjack tuna was easily the largest component of all domestic deliveries at 28,100 st. Domestic deliveries lagged imports by 6,900 st.

Albacore was the leading import for the first quarter of 1996 at 20,200 st, followed by skipjack and yellowfin tuna at 16,300 st and 7,900 st, respectively (Table 3). The leading supplier was Taiwan with 28% of the import market, followed by South Korea and France with 14% and 9% of the market, respectively.

The western Pacific Ocean was the source of 74% of the tuna received by U.S. canners during the first quarter of 1997 (Table 4). The next greatest source was the eastern Atlantic Ocean which accounted for 12% of the tuna received by U.S. canners.

U.S. TUNA FISHERIES UPDATE

EASTERN PACIFIC TROPICAL TUNA FISHERY

During the period January through September 1997, the U.S. tropical tuna fleet in the eastern Pacific caught an estimated 8,100 metric tons (mt) of yellowfin tuna, 8,300 mt of skipjack tuna and 3,800 mt of bigeye tuna (Figure 1). The yellowfin tuna catch was down 11%, the skipjack tuna catch was down 12%, and the bigeye tuna catch was up 9% compared to the same period of 1996. Production for this period was predominantly from seven large (greater than 800 st capacity) purse seiners.

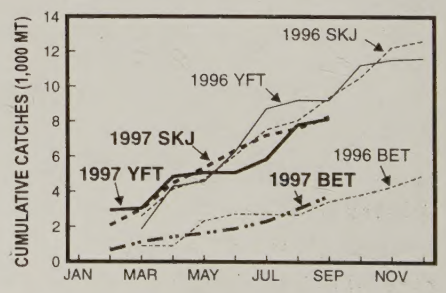


Figure 1. Cumulative tuna catches, by month, for the U.S. eastern tropical Pacific purse seine fishery, 1996 and 1997. (Note that data are not available for the first two months of 1996 and the first month of 1997.)

Table 3. U.S. cannery imports (st) of tuna by species and source (flag of catcher vessel) for the first quarter of 1997. Totals for the first quarter of 1996 are given for comparison. Note that the flag of the catcher vessel does not necessarily reflect the country of export or point of shipment. Totals may not add due to rounding.

VESSEL FLAG	January-March 1997				1996
	Albacore	Skipjack	Yellowfin[1]	TOTAL	TOTAL
BELIZE	*	200	300	500	800
ECUADOR	100	1,100	2,300	3,500	3,300
FSM	0	400	0	400	200
FIJI	100	0	*	100	100
FRANCE	100	2,300	1,500	3,900	8,400
GHANA	0	1,300	800	2,100	0
HONDURAS	2,600	*	0	2,600	100
JAPAN	2,300	400	0	2,600	3,100
NEW ZEALAND	1,800	*	0	1,800	3,100
PANAMA	200	500	100	800	2,900
PHILIPPINES	0	500	200	800	0
SIERRA LEONE	0	100	100	200	0
SOUTH AFRICA	1,400	0	0	1,400	2,200
SOUTH KOREA	1,000	4,900	500	6,400	4,100
SPAIN	0	*	*	100	2,700
SRI LANKA	500	*	*	500	100
TAIWAN	9,600	2,400	600	12,600	16,300
USA	0	*	100	100	800
VANUATU	0	2,000	1,400	3,400	1,600
WESTERN SAMOA	400	0	*	500	100
OTHER	100	0	*	200	3,100
TOTAL	20,200	16,300	7,900	44,400	52,900

*Less than 100 st reported for this category.
[1]May include a small amount of bigeye tuna.

The surface fleets (purse seiners and baitboats) of all nations fishing in the eastern Pacific Ocean caught an estimated 215,800 mt of yellowfin tuna, 95,400 mt of skipjack tuna and 28,200 mt of bigeye tuna. The leading nation was Mexico with 35% of the total catch, followed by Ecuador with 18% and Venezuela with 15%. The U.S. fleet accounted for 6% of the tuna catch.

WESTERN PACIFIC TROPICAL TUNA FISHERY

For the period January through September 1997, U.S. tuna purse seiners fishing in the western tropical Pacific under the South Pacific Tuna Treaty landed an estimated 89,400 mt of skipjack tuna and a combined 39,000 mt of yellowfin and bigeye tuna (Figure 2). The skipjack tuna landings were up 3% and the combined yellowfin and bigeye tuna landings were up 78% from the 1996 landings for the same period. Thirty-three vessels landed tuna from 138 trips in 1997 compared to 40 vessels and 120 trips in 1996. (Report provided by Doug Prescott, NMFS Southwest Fisheries Science Center, La Jolla, CA)

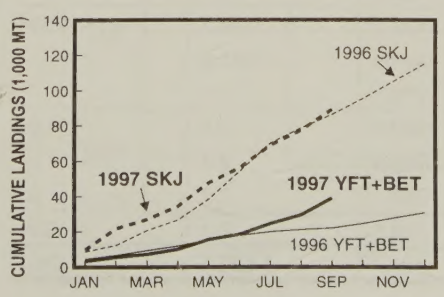


Figure 2. Cumulative tuna landings, by month, for the U.S. western tropical Pacific purse seine fishery, 1996 and 1997.

NORTHERN PACIFIC ALBACORE FISHERY

The 1997 U.S. North Pacific albacore troll season began in May north of Midway Island. Good fishing lasted only a short time during this early phase of the season. Abnormal ocean conditions were prevalent throughout the North Pacific fishing areas. Water temperatures in the offshore areas (1,000-2,000 miles off the coast of Oregon) were as much as 4° below normal, while coastal water temperatures were abnormally high. Numerous schools of albacore were scattered throughout the fishing areas, but high daily catches were sporadic. Total landings are expected to be slightly less than that of 1996 (15,600 mt).

Average weight of troll-caught albacore was approximately 7.7 kg from June through July. Smaller fish (4.5-5.5 kg) began to be caught in August, lowering the overall average weight. Transshipment vessels made four trips from the grounds to the canneries in American Samoa. One NMFS observer accompanied a troll vessel to collect fisheries and research information.

Many changes resulted from a large influx of vessels into the fishery. Several U.S. ports are now available for Canadian vessels to land their fish, and several Canadian ports are available to U.S. boats. Voluntary daily radio reports on fishing conditions have been sharply curtailed due to crowding of vessels in areas where radio reports announced high catches. Many vessels reported high numbers of gill-net-scarred fish. Two illegal high-seas driftnet vessels were sighted by the fleet and reported to the U.S. Coast Guard. A

Table 4. Receipts (st) of tuna by U.S. canneries by species and area of capture for the first quarters of 1996 and 1997. Totals may not add due to rounding.

SOURCE	Albacore		Skipjack		Yellowfin[1]	
	1996	1997	1996	1997	1996	1997
E. ATLANTIC OCEAN						
DOMESTIC	0	0	0	0	0	0
IMPORTED	7,500	3,600	3,100	1,500	1,300	900
TOTAL	7,500	3,600	3,100	1,500	1,300	900
W. ATLANTIC OCEAN						
DOMESTIC	0	0	0	0	0	0
IMPORTED	1,000	800	0	0	0	*
TOTAL	1,000	800	0	0	0	*
E. PACIFIC OCEAN						
DOMESTIC	0	0	2,000	2,900	2,100	1,900
IMPORTED	200	100	4,100	1,900	2,300	3,100
TOTAL	200	100	6,100	4,900	4,400	5,000
W. PACIFIC OCEAN						
DOMESTIC	1,500	900	23,800	25,100	9,600	6,700
IMPORTED	14,200	14,600	5,600	10,500	3,100	2,400
TOTAL	15,700	15,500	29,300	35,700	12,700	9,100
INDIAN OCEAN						
DOMESTIC	0	0	0	0	0	0
IMPORTED	3,000	1,100	3,600	2,300	4,000	1,600
TOTAL	3,000	1,100	3,600	2,300	4,000	1,600

*Less than 100 st reported for this category.

[1]May include a small amount of bigeye tuna.

Table 5. U.S. commercial landings of Atlantic bluefin tuna for 1997 through November 3.

Category	Number of Fish	Avg. Wt. (lbs.)	Gross Wt. (mt)	Adjusted Quota (mt)
GENERAL	3,631	408.3	672.5	703
Handline	83	447.1	16.8	
Rod & Reel	3,285	410.0	610.9	
Harpoon	263	375.5	44.8	
HARPOON	288	403.2	52.7	53
INCIDENTAL	205	473.0	44.0	53
Longline	190	486.3	41.9	52
North	86	401.0	15.6	20
South	104	556.8	26.3	32
Other	15	304.4	2.1	1
PURSE SEINE	1,271	433.1	249.7	250
Giant	1,214	440.5	242.6	
Large Medium	57	275.0	7.1	
ANGLING[1]	27	287.9	3.5	6
North	2	322.5	0.3	2
South	25	285.1	3.2	4
RESERVE	2	294.5	0.3	20
TOTAL	5,424	415.7	1,022.7	1,085

[1]Records Large Medium and Giant size class (Trophy); does not include School, Large School or Small Medium size class tuna harvested in Angling Category.

complete summary of the 1996 U.S. albacore fishery is available by request. (Report provided by John Childers, NMFS Southwest Fisheries Science Center, La Jolla, CA)

SOUTHERN PACIFIC ALBACORE FISHERY

The 1996-97 U.S. South Pacific albacore troll fishery began in December 1996 and ended in April 1997. Approximately 25 vessels landed 1,390 mt, compared to 45 vessels and 2,186 mt in the 1995-96 season. The fishing grounds extend from 140°W to 160°W along 40°S latitude. Several vessels expanded their searching further east (as far as 110°W) during the season in an effort to find areas with large concentrations of fish. Length-frequency and logbook data from the 1996-97 South Pacific troll fishery are currently being summarized. (Report provided by John Childers, NMFS Southwest Fisheries Science Center, La Jolla, CA)

WESTERN ATLANTIC BLUEFIN TUNA FISHERY

For the 1997 U.S. commercial western Atlantic bluefin tuna fishery through November 3, 5,424 fish have been landed with a gross weight of 1,022.7 mt and an average weight of 415.7 pounds per fish. The Harpoon and Incidental Other categories have been closed for 1997. A summary of the landings is given in Table 5. (Report provided by Pat Scida, NMFS Northeast Region, Gloucester, MA)

REPORTS

Editor's note: Original reports are published as a service to subscribers and may not represent the views of the NMFS. Readers should contact the authors of reports for details, if needed.

Evasive Behavior of Spotted Dolphins (*Stenella attenuata*) During Fishing of Yellowfin Tuna (*Thunnus albacares*) in the Eastern Pacific Ocean

Gisela Heckel, Facultad de Ciencias Marinas, Universidad Autonoma de Baja California, Ensenada, Baja California, Mexico

In the Eastern Pacific Ocean (EPO) tuna are caught by "setting on dolphins" because tuna associate with several cetacean species, mainly spotted (*Stenella attenuata*) and spinner (*S. longirostris*) dolphins. During the fishing operation, the tuna purse seiner and its speedboats concentrate the dolphin herd in order to set the net around dolphins and tuna. The dolphins may try to evade the boats to avoid capture.

Have Dolphins Learned to Evade More Effectively?

This study examined the question of whether dolphins have learned to evade more effectively in areas of the EPO where fishing effort is higher and, thus, dolphin experience with the fishery has been greater. Observations recorded in the data bases of the Inter-American Tropical Tuna Commission (IATTC, 1983-1994) and of the Mexican Programa Nacional de Aprovechamiento del Atun y Proteccion de Delfines (PNAAPD, 1992-1995) were used. The applied evasion index was the percentage of evading dolphins relative to the herd's initial size in each set.

Fishing Effort (Sets on Dolphins)

The numbers of sets on offshore spotted dolphins (fishing effort by the Mexican fleet) per one-degree quadrant were mapped, and areas of different fishing effort in the EPO were determined for this stock. Based on this map, as well as data from the international fleet, the EPO was divided into six areas, each relatively homogeneous with respect to effort density. Area A (Mouth of the Gulf of California) represents the highest and area F (South Equatorial Current) the lowest fishing effort areas of the Mexican fleet (Figure 3). Data for areas E (Intertropical Convergence Zone) and F were eliminated from the analysis due to their heterogeneity and small sample size. Area D (Far Offshore) was the lowest fishing density area studied here.

Fishing effort in area C (Costa Rican Dome) is lower than in area B (Southern Mexico-Offshore) for the Mexican fleet (Table 6, Average Sets per Quadrant) but higher than in area B when number of years that the international fleet has set on dolphins is considered (Table 6, Average Years per Quadrant). Sets on dolphins (*Stenella attenuata, S. longirostris, S. coeruleoalba* and *Delphinus delphis*) by the international fleet have occurred for the last 35 years (average per quadrant) in area C whereas in area B dolphin sets have occurred only for the last 30 years (average per quadrant).

The Tuna Fishery, a Complex Issue

The influence of several factors on evasion by the offshore spotted dolphin was assessed. Factors that significantly influence offshore spotted dolphin evasion are fishing effort area, herd size, vessel carrying capacity, aerial assistance, number of

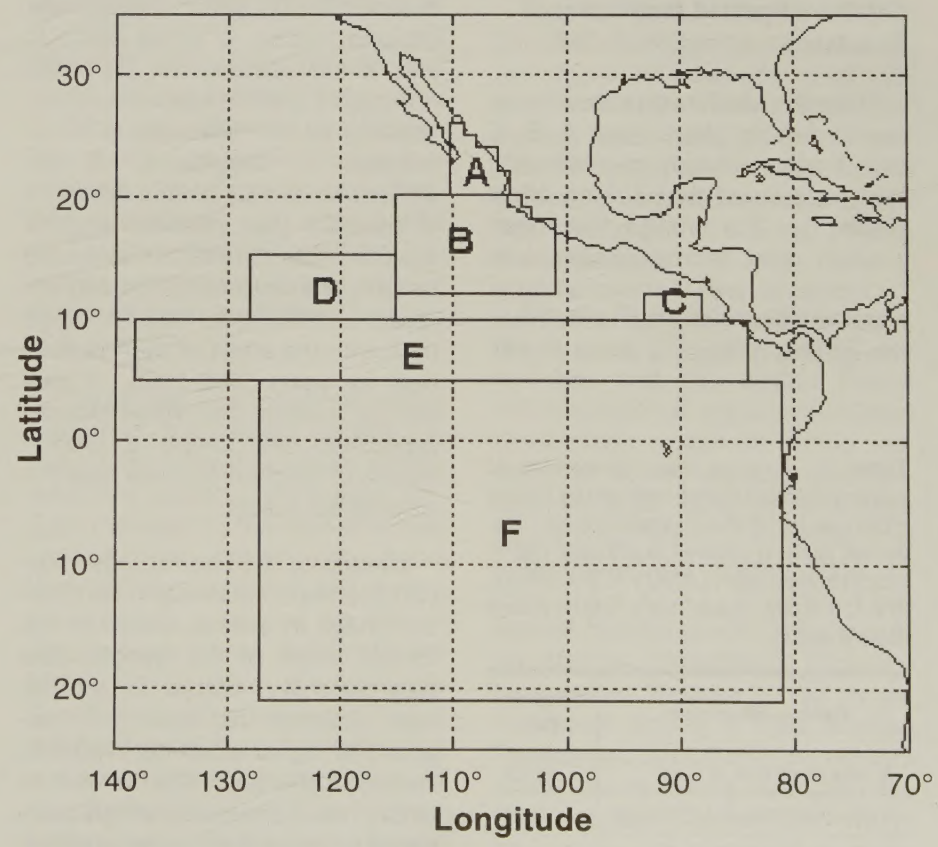


Figure 3. Fishing effort areas for the offshore spotted dolphin (*Stenella attenuata*) based on average number of sets per quadrant on this stock by the Mexican fleet, 1992-1995. (See Table 6 for data and Table 7 for area names.)

Table 6. Fishing effort areas for the offshore spotted dolphin based on (1) average number of sets per quadrant on this stock by the Mexican fleet, 1992-1995); and (2) the average number of years each quadrant contained sets on dolphins (*Stenella* spp. and *Delphinus delphis*) by the international fleet, 1959-1994.

Area	Latitude (N except area F)	Longitude (W)	Total Sets by Area	Average Sets per Quadrant	Average Years per Quadrant
A	20 to 26	105 to 110	523	24.90	37
B	12 to 20	101 to 115	1,903	17.95	30
C	10 to 12	88 to 93	147	14.70	35
D	10 to 15	115 to 128	532	8.18	24
E	5 to 10	84 to 138	508	1.88	22
F	5 N to 21 S	81 to 128	148	0.12	9

speedboats, use of explosives, year, season of the year, month, time of day, Beaufort level and strong current. Significant interactions were found between several factors.

Offshore Spotted Dolphin Evasion

The calculated mean evasion indices by fishing effort areas A, B, C and D approximately coincide with the measure of their fishing effort (Table 7). This implies that mean evasion index decreases from A to D. However, area C shows a higher mean evasion index than area B (although this difference is not significant). This may be explained when we consider the number of years that fishing on dolphins has occurred using data from 1959 to 1994 for the international fleet.

Table 7. Evasion index (percentage of evading dolphins during each set) by fishing effort area for offshore spotted dolphin. Statistical analysis showed significant differences between areas (ANOVA, F = 108.33, df = 3, p 0.001; Tukey test, p 0.001) except areas B and C.

Fishing Effort Area	Evasion (%)
A: Mouth of Gulf of Calif.	62.64
B: Southern Mexico-Offshore	37.14
C: Costa Rica Dome	47.21
D: Far Offshore	13.60

In areas closest to the coast (as area C) there has been fishing on dolphins for 35 years (average per quadrant, Table 6) while effort in area B has occurred for 30 years. Although this effort index was calculated for all *Stenella* species (*S. attenuata, S. longirostris, S. coeruleoalba*) and *Delphinus delphis*, it is possible that offshore spotted evasion observed in area C is related more to the historical effort and the recent international fleet's effort than with the effort of the Mexican fleet for years 1992-1995. It may also be possible that higher evasion capabilities are simply a characteristic of dolphins that live near the continental coasts.

Therefore, the data at least support the hypothesis that mean evasion index by area is related to the fishing effort of the geographical area studied. Stated in another way, dolphins that have been exposed to higher effort (as in area A) have probably been able to learn to evade more effectively when compared to those dolphins in other areas where less effort has occurred (as in area D). This result was as expected from the simple hypothesis relating evasion to learning, and occurred in spite of the many factors that could have affected the index. It also corresponds to descriptions by other researchers of dolphin behavior during fishing operations. Area A approximately coincides with the distribution of certain coastal dolphin herds called "the untouchables" by fishermen. These dolphins are capable of completely evading the fishing operation even before the net has been set. Interestingly, while they have had the most exposure to fishermen, they also have exhibited this behavior from the earliest years of the international fishery.

Dolphin learning has been observed in captivity for many years. Dolphin trainers spend long hours trying to teach these animals certain tasks which they elicit with a signal (visual or auditory) and reward with food. It is important to mention that these tasks are behaviors that dolphins display naturally when not in captivity (fast swimming, leaping, finding objects on the bottom of the tank); the trainer's objective is for the dolphins to repeat these behaviors when requested. Analogously, dolphins involved in the tuna fishery have possibly learned to evade the seiner and the speedboats as if they were natural predators (for example killer whales, as well as false killer and pigmy killer whales). It seems logical that they are able to learn to evade more effectively as their experience increases. More efficient evasion might be due to enhanced coordination of the herd's movements; herds "exploding" into subgroups have been described.

RECENT DEVELOPMENTS IN TUNA FISHERIES

Editor's note: The following news items, compiled from fishery trade and industry journals, newspapers and NMFS reports, are provided only as a service to our readers. The NMFS does not guarantee their accuracy.

UNITED STATES

Swordfish Quotas: On July 25, 1997, NMFS published proposed regulations outlining more stringent swordfish quotas to help restore overfished stocks, with different regulations for fisheries in the North and South Atlantic. While the 1997 North Atlantic quota would be reduced to 2,458 mt from a 1996 quota of 2,625 mt, a separate South Atlantic quota for U.S. fishermen would be set at 187.5 mt. North Atlantic quotas would decline further in 1998 and 1999. (NMFS Press Release)

Undersize Swordfish: On September 9, 1997, NMFS published an advanced notice of proposed rulemaking, requesting comments on options to prohibit the sale of undersize Atlantic swordfish. This action would implement an ICCAT recommendation. (Federal Register)

Tuna Firm Renamed: On its first day of business under new ownership, the former Van Camp Seafood announced it has been renamed after its flagship product, Chicken of the Sea tuna. The 85-year-old company, now known as Chicken of the Sea International, was sold for $97 million to Tri-Union Seafoods. Van Camp is the nation's third largest seller of canned tuna, after market leader StarKist and Bumble Bee Seafoods. Bumble Bee and Van Camp, both based in La Jolla, have been struggling financially in the past year. Both filed for Chapter 11 bankruptcy and were sold to new owners this year. (North County [San Diego] Times, August 8, 1997)

Heinz Acquisition: On June 30, 1997, H.J. Heinz announced that its affiliate, H.J. Heinz of London, had acquired John West Foods Limited (Liverpool, U.K.), a brand of canned tuna and fish, from the Anglo-Dutch Unilever Group. Annual sales of John West brand products exceed $250 million. (H.J. Heinz Co. Press Release)

Bumble Bee Seafoods Sale: On July 1, 1997, International Home Foods announced completion of the purchase of the canned seafood business of Bumble Bee Seafoods for $163 million cash and assumption of certain liabilities. (Dow Jones News)

Dolphin Safe Redefined: Following overwhelming approval in Congress, President Clinton signed into law on August 15, 1997, a bill that will open U.S. markets to tuna caught in association with dolphins in the eastern tropical Pacific. The international efforts to cut dolphin kills during tuna seining resulted in reducing the mortality rate from over 400,000 per year in the 1960s to 2,500 in 1996. The bill also removes embargoes against nations that had been excluded from the U.S. market.

The bill requires fishermen selling tuna from the eastern tropical Pacific to the United States to participate in a dolphin conservation program managed by the Inter-American Tropical Tuna Commission. More than 100 environmental and recreational groups supported the bill, including Greenpeace, the Center for Marine Conservation, the American Sportfishing Association and World Wildlife Fund. A host of animal rights and preservationist groups opposed it, including the Sierra Club, the Humane Society, People for the Ethical Treatment of Animals and Earth Island Institute.

Besides lifting embargoes, the act changes the definition of "dolphin safe" to mean tuna taken during sets in which no dolphins were injured or died. Previously, dolphin-safe meant tuna were not taken in association with dolphins. Changes in the dolphin-safe label will be delayed until March 1999, when the NMFS is to release preliminary findings of a study regarding the health of the dolphin stocks. (National Fisherman, October 1997)

U.S. Seafood Consumption: On August 1, 1997, NMFS officials announced that U.S. seafood consumption declined modestly to 6.7 kg per person during 1996 from 6.8 kg per person in 1995. The 0.1 kg per person decline was noted for canned seafood products. Imported seafood comprised 57% of U.S. consumption during 1996, a 3% increase from 1995. (NOAA Press Release)

Bluefin Tuna Fines: On August 20, 1997, NMFS announced that six individuals had been assessed a total of $380,000 in fines and had their permits suspended for violations of Atlantic bluefin tuna harvesting and marketing regulations in the South Atlantic and Gulf of Mexico. (NOAA Press Release)

Bluefin Tuna Import Sanctions: On August 21, 1997, NMFS announced that the United States would prohibit all imports of Atlantic bluefin tuna caught by fishing vessels from Belize, Honduras and Panama because these nations were found to be fishing in a manner that undermines the conservation efforts of the ICCAT. The import ban against Honduras and Belize would be effective immediately, while the ban against Panama would be delayed until January 1, 1998, to allow Panama an opportunity to demonstrate that its fishing practices have been modified. All 24 ICCAT-member nations are expected to implement similar restrictions. No bluefin tuna is currently imported by the

UPCOMING TUNA MEETINGS

(Organizer; meeting type: sci=science, adm=administration)

- NOV 5-8. Seventh Annual Conference for Pacific Islanders. Toward a Prosperous Pacific: Building a Sustainable Tuna Industry in the Pacific Islands. Maui, HI. (Maui Pacific Center; adm)
- NOV 14-21. ICCAT Commission meeting. Madrid, Spain. (ICCAT; adm)
- DEC 1-5. MHLC Management Working Group. Honiara, Solomon Islands. (FFA; adm)
- DEC 3-5. 15th North Pacific Albacore Workshop. Nanaimo, BC, Canada. (Canadian Dept. of Fisheries and Oceans; sci)

1998

- May 18-21. 49th International Tuna Conference. Lake Arrowhead, CA. (NMFS; sci)
- JUN 1-6. SCTB Meeting. Honolulu, HI. (South Pacific Commission; sci)

United States from these 3 countries. (NOAA Press Release)

Korean Longliner Seized: On August 4, 1997, the U.S. Magistrate in Honolulu issued a seizure warrant for the 137-foot Korean longliner *Shin Chang No. 502*, docked in American Samoa for repairs. A civil complaint for forfeiture of the vessel alleges this vessel entered and fished in the U.S. Exclusive Economic Zone around Palmyra Island without a permit five times in May and June 1997. (Associated Press)

South Pacific Tuna: In late September 1997, the South Pacific's Forum Fisheries Agency held discussions with the U.S. Tuna Foundation. The FFA requested that the U.S. tuna fleet increase the proportion of Pacific Islander crew members on U.S. vessels from its current 15% to 50% over a five-year period. Discussions also included use of shore facilities by the U.S. tuna fleet and investment in island tuna processing. (Associated Press)

Hawaiians Adapt Tracking Systems: Hawaiian longliners have begun to adapt vessel tracking systems (VTS), required under U.S. federal regulations, for use as full-fledged communications units. So far about 25 vessels have had their VTS boxes converted, at a collective cost of around $500,000. The VTS was recently made mandatory to allow fishery control agencies to monitor vessel movements. The Hawaiian fleet was among the first to be equipped, giving officers at the Honolulu Coast Guard Center the ability to obtain a fix on the location of a vessel at any time. According to the NMFS, one aim is to keep vessels out of areas reserved for threatened populations of Hawaiian monk seals. Although the boxes were initially regarded as a hindrance, owners are now taking a more positive view.

"Many skippers disliked the satellite linked trackers at first," said Jim Cook, vice president of fishing company Pacific Ocean Producers. "Now we're taking full advantage of the system." For around $2,500 per boat, each vessel in the company's fleet has had a computer and software linked up with the VTS box, so it can now monitor movements from its head office. The upgraded system is being used to exchange information about mechanical problems, status of fishing operations and catches, as well as conveying personal messages. All text messages automatically carry a vessel's location, but skippers working in competition can "clean" electronic mail through dispatch centers. On the other hand, revealing a position can sometimes be helpful, such as when there is a combined effort to reduce bycatch. (World Fishing, August 1997)

WESTERN PACIFIC

High Seas Driftnet Fishing: On July 1, 1997, the Guam-based U.S. Coast Guard cutter *Basswood* intercepted a 130-foot fishing vessel, reportedly claiming Chinese registry, and followed the vessel while checking to verify its port of registry. Although refuted by China on July 3, 1997, the vessel claimed it was registered to China and appeared headed for its claimed home port at Zhoushan Dao Island. With registry refuted, the vessel was considered "stateless" and subject to U.S. law. On July 9, 1997, the Coast Guard seized and boarded the *Cao Yu 6025* 70 miles southwest of Kyushu Island, Japan, in the East China Sea; the vessel and crew were to be taken to Guam for prosecution. Aboard the vessel were 12 miles of driftnet and 120 tons of fish, including tuna, swordfish, and sharkfin. (Associated Press)

South Korean Fish Import Quotas: On June 30, 1997, South Korea will terminate its fish import quota system, leaving Japan as the only developed nation using quotas to limit fish imports. (Dow Jones News)

SBT Farming Research: A $3.7 million R&D initiative is underway to improve the efficiency and cost-effectiveness of Australian southern bluefin tuna farming. Implemented as a new Fisheries Research and Development Corporation sub-program, the three-year venture unites the research efforts of various Australian agencies. Its major thrusts are improved feed economics and product quality. SBT farming at Port Lincoln currently adds value to half the wild fish caught on Australian quota, producing about 3,000 mt a year worth $66 million on the Japanese market. However, the caged fish are still fed frozen pilchards of

varying quality, costing about $15 million a year. The research team believes development of a manufactured feed could reduce this by as much as $7 million. Because SBT farming's profitability depends largely on the strength of the yen relative to the Australian dollar, such savings could become essential to future viability and growth. (Fisheries Research and Development Corporation, July 1997)

ATLANTIC

EU/Cape Verde Fisheries Agreement: The fisheries agreement between the European Union and Cape Verde has been renewed. The previous agreement expired on September 5, 1997. Under the new three-year agreement which entered into force on September 6, 76 EU vessels, primarily French, Portuguese and Spanish, will catch tuna and other highly migratory species off Cape Verde. (INFOFISH Trade News, August 15, 1997)

Bluefin Tuna Imports Banned: The Japan Fisheries Agency announced a ban on imports of Atlantic bluefin tuna from Honduras and Belize effective September 3, in line with a recommendation issued by the ICCAT. The JFA will also investigate allegations that the Atlantic bluefin tuna from the two countries actually comes from Pacific waters. Domestic importers may be asked to provide samples for DNA analysis. (INFOFISH Trade News, September 2, 1997)

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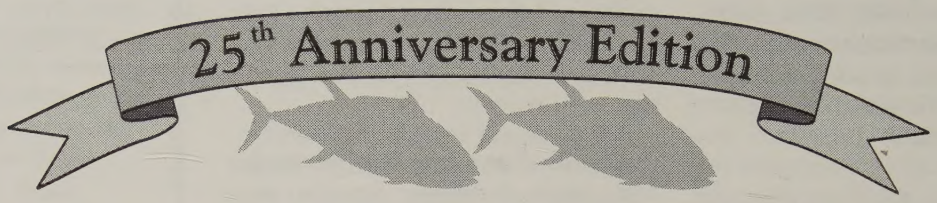

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